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EXAMINER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/798,300
Filing Date: March 12, 2004
Appellant(s): KOBAYASHI, ATSUMI

MAILED

AUG 28 2007

GROUP 3600

Manabu Kanesaka
1700 Diagonal Road, Suite 310
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For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/9/2007 appealing from the Office action mailed 1/19/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct, however, upon further consideration, the current status of the claims has changed as shown below.

Claim 1 stands rejected under 35 USC 102(b) over Taruki JP 09292742.

Claims 2-4,7,10-13 stand rejected under 35 USC 103(a) over Taruki JP 09292742.

Claims 5 and 6 are now objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8 and 14 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 5, Honjo discloses a guide member that may be positioned below the platen and switch to a position above the platen. However, it is not positioned

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at the discharge side of the platen and therefore does not operate in the same manner as claimed.

Regarding claim 8, Taruki does not disclose the steps of sheet transport in the order of the instant application. Specifically, Taruki does not disclose transporting the document from the switch back path toward a sheet discharging tray after the step of guiding the sheet to the switch back path but before transporting the document to the platen a second time.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

35 USC 102(b) rejection of claim 8 over Taruki.

35 USC 103(a) rejection of claim 5 over Taruki in view of Honjo.

35 USC 103(a) rejection of claim 6 over Taruki in view of Yano.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP 09292742 A	TARUKI	11-1997
4,817,933	HONJO et al.	04-1989
6,467,767	YANO	10-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Taruki JP 09292742.

Taruki discloses a similar document transport apparatus comprising:

- A sheet feeding tray (5) and a sheet discharging tray (23)
- Sheet feeding means (7) being disposed at one side of the document transport apparatus
- Transport means (16) disposed adjacent to the sheet feeding means

- Sheet discharging means (38) disposed adjacent to the transport means at a side opposite to the sheet feeding means and located at the other side of the document transport apparatus (fig.1)
- A switch back path (20,21) disposed adjacent to the sheet discharging means and located between the transport means and the sheet discharging tray
- A sheet discharging path (22) disposed adjacent to the sheet discharging means

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4,7,10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taruki JP 09292742.

Regarding claims 2,4, and 11, Taruki discloses all the limitations of the claim, but is silent about the apparatus further comprising control means electrically connected to the transport means and the sheet discharging means and wherein the control means controls the transport means and the sheet discharging means.

However, because it is described as an automatic document feeder (title), it is obvious to one of ordinary skill in the art at the time of invention that the automatic document feeder comprises control means electrically connected to transport means

and sheet discharging means and wherein the control means controls the transport means and the sheet discharging means.

Regarding claim 3, Taruki discloses the apparatus wherein the discharging tray is located below the sheet feeding tray and above the platen (fig.1).

Regarding claim 5, Taruki discloses the apparatus further comprising a guide member (34) disposed at a discharge side of the platen.

Regarding claim 7, Taruki further discloses the apparatus wherein the sheet discharging means include a pair of sheet discharging rollers (38) and the discharge path is located between the platen (3) and the pair of sheet discharging rollers and branched from the switch back path (fig.1).

Regarding claim 10, Taruki discloses a similar image reading apparatus comprising a document transport apparatus (1), a platen (3), and reading means (2) (fig.1).

Regarding claim 12, Taruki further discloses the apparatus wherein said switch back path includes a first portion (20) extending to a portion adjacent to the transport means, a second portion (21) extending toward the sheet discharge path, and a gap (24) disposed between the first and second portions (fig.1).

Regarding claim 13, Taruki further discloses the apparatus wherein said sheet discharging path includes a U turn path connecting the first and second portions without passing the gap (abstract) (fig.1).

(10) Response to Argument

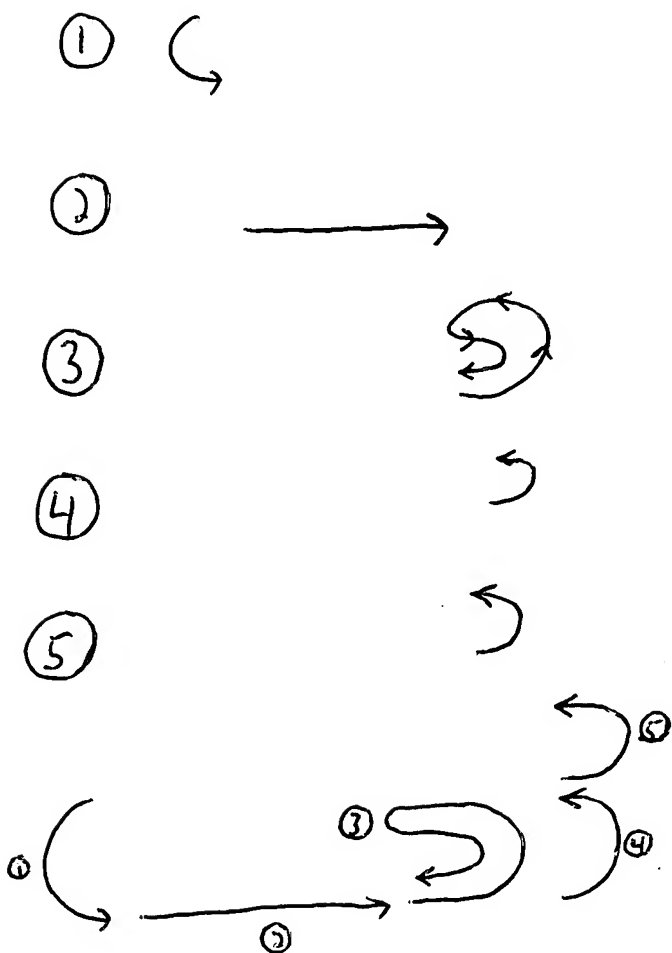
35 USC 102 rejection over Taruki JP 09292742

Claim 1:

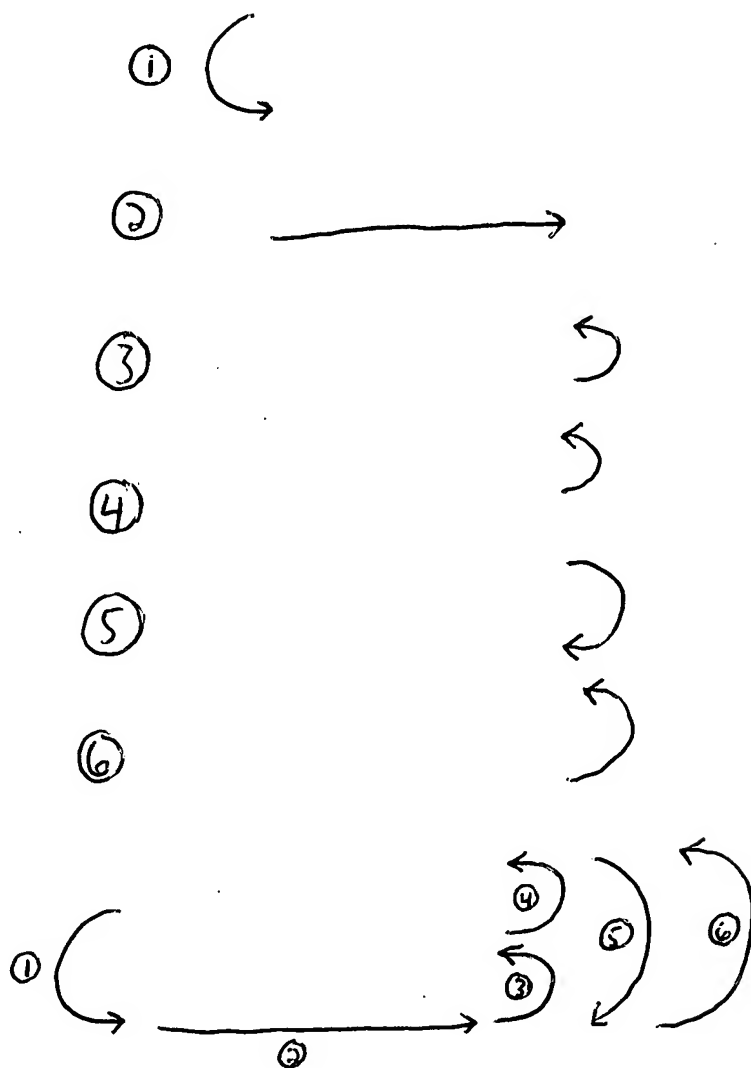
Appellant argues the claimed apparatus does not have a fourth path "in the form of a letter S," and does not invert the document twice without switching it back from the switch back carrying path, and that it is clear from Taruki's abstract and fig.1 that the document is inverted again as it is transported from fourth path 24 back to the contact class 3. In response, the Examiner agrees with Appellant's statement. However, Appellant appears to argue the shape of Taruki's switchback path as compared to the shape of Appellant's structure that has not been claimed. Further, Appellant appears to argue the path the document takes rather than the structure of the claimed apparatus. As shown in the rejection and below (next page), Taruki discloses the all of the claimed functions. As discussed by Taruki in at least ¶0019, the document is conveyed from the sheet feeding tray (5) by sheet feeding means towards the platen, as shown in steps 1 and 2 (see next page). Upon copying the first side of the document to be copied, the document travels through path (20), into path (21), through path (24) and back to the platen so the other side of the document may be copied, as shown in step 3. The switch back path turns the document upside down at step 3, reverses the leading end and trailing end of the document after copying the second side of the document at the end of step 3 and beginning of step 4, and guides the document to the sheet discharging means (38) while turning the document upside down again at step 4. At step 5, the sheet discharging path (22) turns the document upside down and guides the

document to the sheet discharging means without reversing the leading and trailing ends of the document. The leading and trailing ends of the document are reversed at the end of step 4 by way of the switch back path, not by way of the sheet discharging path. Nevertheless, the structure is equivalent to that of Appellant's claimed invention.

Tanuki



instant application



35 USC 103 rejection over Taruki JP 09292742

Claims 2-4,7,10-13:

Appellant argues the rejections are in error because the disclosure of Taruki would not have rendered obvious the apparatus as defined by claims 2-4,7,10-13.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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(11) Related Proceeding(s) Appendix


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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PTO 07-6337

CC=JP DATE=19971111 KIND=A
PN=09292742

AUTOMATIC DOCUMENT CONVEYANCE DEVICE
[Jidou Genkou Hansou Souchi]

Takashi Taruki

UNITED STATES PATENT AND TRADEMARK OFFICE
Washington, D.C. August 2007

Translated by: FLS, Inc.

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INTERNATIONAL CLASSIFICATION	(51):	G 03 G 15/00; B 65 H 85/00; G 03 B 27/62
PRIORITY	(30):	
INVENTORS	(72):	TARUKI, TAKASHI
APPLICANT:	(71):	RICOH CORP.
DESIGNATED CONTRACTING STATES	(81):	
TITLE	(54):	AUTOMATIC DOCUMENT CONVEYANCE DEVICE
FOREIGN TITLE	[54A]:	JIDOU GENKOU HANSOU SOUCHI

[Claim 1] An automatic document conveyance device, where an automatic document conveyance device equipped with

a document setting stand to set a document, and provided on the lower part of said document setting stand is

a document discharge stand to accumulate discharged documents, and

a paper feed mechanism to consecutively separate and feed from above a document that is loaded on aforementioned document loader stand one sheet at a time, and

a primary conveyance mechanism to convey to a designated position below aforementioned document setting stand a reversed document from said paper feed mechanism, and

a secondary conveyance mechanism to discharge a document from aforementioned designated position, reverse, and again convey to aforementioned designated position, and

a tertiary conveyance mechanism to discharge a document from aforementioned designated position and convey to aforementioned document discharge stand,

is characterized by aforementioned secondary conveyance mechanism discharging a document from aforementioned designated position, and reversing and conveying to a space between aforementioned designated position and aforementioned document

*Numbers in the margin indicate pagination in the foreign text.

discharge stand, and moreover reversing at least two times and again conveying to aforementioned designated position, a tertiary conveyance mechanism discharges from abovementioned designated position, reversing and conveying to a space between aforementioned designated position and aforementioned document discharge stand, switches back and conveys to aforementioned document discharge stand.

[Detailed explanation of invention]

[0001] [Technical field of invention]

This invention pertains to an automatic document conveyance device that can be equipped on a copier, facsimile, or other image forming device, or a scanner or such image reading device, in particular referring to an automatic document conveyance device to convey to a designated position in order both the front and back of a two-sided document.

[0002] [Previous technology]

Previously, automatic document conveyance devices were equipped on copiers, facsimiles and such image forming devices, or on scanners and such image reading devices, for example, like that detailed in JP H02-175573A. In order to read images of a two-sided document set in a document setting stand on that type of automatic document conveyance device, one sheet at a time is separated in order from the top of a document set image side up in a document setting stand, reversed, stopping at a designated reading position on contact glass installed on the upper surface of an image reading device. Then after reading

the back surface of a document, a document is discharged from the document insertion side of a contact glass, reversed, again stopping at a designated reading position. Then after reading the front surface of a document, a document is discharged from the document insertion side of a contact glass, reversed and discharged to a paper discharge stand.

[0003] [Issues the invention proposes to solve]

In this type of automatic document conveyance device, however, because a reverse roller and a reverse path are installed to the side of a contact glass in order to reverse front and back of a document after reading the front of a document, the length in a lateral direction of the overall device is increased by that reverse roller portion. Because of this, in a case of installing an automatic document conveyance device on a small model with a short distance between a side surface of an image reading device and a contact glass, the width of an automatic document conveyance device becomes larger than an image reading device, and an automatic document conveyance device sticks out to the side from an image reading device. That is where this device is something to solve the abovementioned problem points of before, having the objective of providing an automatic document conveyance device aimed at small model image reading devices that is able to perform reading of both sides of a one page document.

[0004] [Methods to solve the issues]

This invention, in order to achieve the above objective, provides an automatic document conveyance device that is an automatic document conveyance device equipped with a document setting stand to set a document, and provided on the lower part of said document setting stand is a document discharge stand to accumulate discharged documents, and a paper feed mechanism to consecutively separate and feed from above a document that is loaded on aforementioned document loader stand one sheet at a time, and a primary conveyance mechanism to convey to a designated position below aforementioned document setting stand a reversed document from said paper feed mechanism, and a secondary conveyance mechanism to discharge a document from aforementioned designated position, reverse, and again convey to aforementioned designated position, and a tertiary conveyance mechanism to discharge a document from aforementioned designated position and convey to aforementioned document discharge stand, and aforementioned secondary conveyance mechanism discharges a document from aforementioned designated position, and reverses and conveys to a space between aforementioned designated position and aforementioned document discharge stand, and moreover reverses at least two times and again conveys to aforementioned designated position, a tertiary conveyance mechanism discharges from aforementioned designated position, reverses and conveys to a space between aforementioned

designated position and aforementioned document discharge stand, switches back and conveys to aforementioned document discharge stand.

[0005] [Operation]

With a construction of this invention, in a case of a document set in a document setting stand being a one-sided document, that document is consecutively separated one page at a time from above by a separation conveyance mechanism, and reversed and conveyed to a designated reading position by means of a primary conveyance mechanism. After document reading, that document is discharged from a designated reading position by means of a tertiary conveyance mechanism, reversed and conveyed to a space between a designated position and a document discharge stand, and after that is switched back, conveyed to a document discharge stand and stacked.

[0006] Also, in a case of a document set in a document setting stand being a two-sided document, in the same way as a case of a one-sided document, that document is consecutively separated one page at a time from above by a separation conveyance mechanism, and reversed and conveyed to a designated reading position by means of a primary conveyance mechanism. After reading the front side of a document, that document is discharged from a designated reading position by means of a secondary conveyance mechanism, reversed and conveyed to a space between a designated reading position and a document discharge stand. Then, after reversing in a space between a designated position and a document discharge stand, it is reversed one more time and

conveyed to a designated reading position. After reading the back of a document, that document is again conveyed to a designated reading position by means of a secondary conveyance mechanism, and without reading the document is discharged from a designated reading position by means of a tertiary conveyance mechanism, reversed and conveyed to a space between a designated position and a document discharge stand, and after that is switched back, conveyed to a document discharge stand and stacked.

[0007] [Implementation example]

Below, one implementation example of an automatic document conveyance device of an application of this invention is explained referring to the figure. Figure 1 is a cross section figure showing one implementation example of an automatic document conveyance device of this invention. In Fig. 1, 1 is an automatic document conveyance device attached able to open and close on the top portion of a copier, facsimile or such image forming device 2. Image forming device 2 is equipped with an upper surface of contact glass 3, and document /3 reading is performed by means of automatic document conveyance device 1 conveying and stopping in a designated reading position on contact glass 3. 4 is a scale that protrudes and hits a back edge of a document conveyed to contact glass 3 in order to stop a document in a designated reading position on contact glass 3. It is possible to set two-side mode and one-side mode by means of a command on a control element not shown of image forming device 2, controlling the reading

operation of image forming device 2 and conveyance operation of automatic document conveyance device 1 in response to the mode setting. At this point, in this implementation example, although automatic document conveyance device 1 is attached to image forming device 2, this invention is not limited to this, but can also be attached able to open and close on top of a scanner or such an image reading device.

[0008] Next, an automatic document conveyance device is concretely explained. 5 is a document setting stand with document 6 set, and document 6 is set image side up in order from the top. 7 is a paper feed belt, which is stretched across rollers 8, 8. 9 is a press up plate, normally in a standby position shown by a solid line under the setting surface of document setting stand 5, which can move to a space for paper supply shown by a dashed line pressing document 6 which is set on document setting stand 5 against paper feed belt 7. This press up plate 9, at the start of feeding document 6 when document setting sensor 10 detects a document on document setting stand 5, raises from standby position to paper supply position, contacting document 6 with paper feed belt 7.

[0009] Paper feed belt 7 turns in a clockwise direction by means of rollers 8 being turned in a clockwise direction, feeding document 6 pressed up against it by press up plate 9. 11 is a resistance roller that touches paper feed belt 7 in the space between rollers 8, 8. This resistance roller 11, by stopping and rotating in a clockwise

direction, uses mutual friction acting on feed belt 7 and document 6 fed from paper feed belt 7 to consecutively separate one sheet at a time from the top position of document 6.

[0010] Primary conveyance path 12 is the path to conduct a separated portion of document 6 conveyed by paper feed belt 7 to on top of contact glass 3. Sensor 13, conveyance roller pair 14, and sensor 15 are installed in order from the downstream side of document conveyance direction on this primary conveyance path 12. Sensor 13 is to detect document 6 fed from document setting stand 5. Conveyance roller pair 14 is to temporarily press a nip element to a front edge of approaching conveyed document 6 and after adjusting the skew of document 6 convey document 6 to the top of contact glass 3. Sensor 15 is to detect document 6 having been conveyed to the top of contact glass 3.

[0011] 16 is a conveyance belt installed in a position facing opposite of contact glass 3. Conveyance belt 16 is stretched around rollers 17, 18, and multiple pressure rollers 19, and by means of multiple pressure rollers 19 presses against contact glass 3. Document 6 that is conveyed by primary conveyance path 12 is conveyed to the top of contact glass 3 by rotation in a counter clockwise direction of conveyance belt 16, next the rear edge of document 6 at a point of just passing scale 4 by means of conveyance belt 16 turning in a clockwise direction, the rear edge touches scale 4 and stops in a designated reading position.

[0012] Secondary conveyance path 20 is the path in order to reverse document 6 sent from the opposite side of scale 4 from contact glass 3 by means of conveyance belt 16 and conduct to switch back conveyance path 21 installed above conveyance belt 15. Also, tertiary conveyance path 22 is the path in order to reverse document 6 switched back from switch back conveyance path 21 and conduct to discharge stand 23 installed above switch back conveyance path 21. Also, quaternary conveyance path 24, shaped in an abbreviated S shape, is the path in order to conduct document 6 from switch back conveyance path 21 without switching back again to contact glass 3.

[0013] 25 is a drive roller, 26, 27 are reverse drive enabled rollers, and 27, 28, 29, 30, 31, 32, and 33 are passive rollers that turn with drive rollers 24, 25, 26. 34, 35 are changeover tabs. This changeover tab 34 in the solid line position guides document 6 being conveyed from secondary conveyance path 20 to switch back conveyance path 21, and in the dashed line position guides document 6 switched back in switch back conveyance path 21 to tertiary conveyance path 22. Also, changeover tab 35 in the solid line position guides document 6 conveyed from switch back path 21 just as is to the inner part of switch back conveyance path 21, and in the dashed line position guides document 6 conveyed from switch back path 21 to quaternary conveyance path 24. By sensor 36 detecting the rear edge of document 6 conveyed inside switch back conveyance path 21, counter clockwise rotating rollers 26, 27 turn clockwise and switch back document 6.

Also, by sensor 37 detecting the front edge of document 6 conveyed by quaternary conveyance path 24, counter clockwise rotating conveyance belt turns clockwise and again conveys document 6 to contact glass 3, stopping document 6 in a designated position.

[0014] 38 is a pair of discharge rollers, which discharge document 6 conveyed from tertiary conveyance path 32 to discharge stand 23.

[0015] Next, operation is explained.

A. In a case of setting one-side mode

When a start key installed on a not shown control element of image reading device 2 is pressed, it checks whether or not a document is set on document setting stand 5 by means of a detection signal from document setting sensor 10, and if a document is set in document setting stand 5, document feed operation starts. First, press up plate 9 moves to feed position shown by the dotted line, and together with pressing document 6 set in document setting stand 5 /4 against paper feed belt 7, paper feed belt 7 turns clockwise. Then, by means of mutual friction between paper feed belt 7 and resistance roller 9 [sic], single pages from the top of document 6 are consecutively separated and sent to primary conveyance path 12.

[0016] Sensor 13 detects that front edge of the first page of document 6 sent from primary conveyance path 12, next, at that point is stopped by a nip element of roller pair 14 that has stopped

rotating. Roller pair 14 moves after passage of a designated time T1 from front edge detection point of document 6 by means of sensor 13.

[0017] When roller pair 14 starts moving, drive of paper feed belt 7 stops, drive of conveyance belt 16 starts and turns counter clockwise. Even with drive of paper feed belt 7 stopped, only the separated top of document 6 is pulled and conveyed inside primary conveyance path 12 by the drive of roller pair 14.

[0018] Next, when sensor 15 detects the rear edge of that document 6, together with the drive of roller pair 14 stopping, after passing of designated time T2 from rear edge detection point, during designated time T3 conveyance belt 16 is turned clockwise and stops. By doing this, document 6 is stopped in a designated reading location by that rear edge touching scale 4, and a reading operation of document 6 is executed.

[0019] After reading document 6, together with conveyance belt 16 again turning counter clockwise, drive roller 25, 26, 27 and discharger roller pair 38 are driven, and document 6 is conveyed from on top of contact glass 3 past secondary conveyance path 20 to inside switch back conveyance path 21. At that time, paper feed belt 7 again starts driving, and feed operation of the next document 6 is started.

[0020] By sensor 36 detecting a rear edge of document 6 conveyed inside switch back conveyance path 21, together with changeover tab 34 moving from solid line position to dotted line position, counter clockwise turning drive rollers 26, 27 turn clockwise. By doing this,

document 6 is switched back inside switch back conveyance path 21, passing through tertiary conveyance path 22 and discharged to discharge stand 23 by discharge roller pair 38.

[0021] Below, by executing repeatedly the above explained operation on document 6 until document setting sensor 10 does not detect document 6, one-sided document processing of document 6 in document setting stand 5 is completed.

[0022] B. In a case of setting two-sided mode

From pressing a start key installed on a not shown control element of image reading device 2, until a front side of the first page of document 6 stops in reading position, the same operation in a case of setting one-side mode is executed. After reading the front of document 6, together with conveyance belt 16 again turning counter clockwise, drive rollers 25, 26, 27 are driven, and document 6 is conveyed from contact glass 3 past secondary conveyance path 20 inside switch back conveyance path 21.

[0023] By means of sensor 36 detecting a front edge of document 6 conveyed inside switch back conveyance path 21, changeover tab 35 is moved from solid line position to dashed line position, and document 6 is conveyed to quaternary conveyance path 24. Then, by sensor 37 detecting a front edge of document 6, counter clockwise turning conveyance belt 16 turns clockwise again conveying document 6 to contact glass 3, and together with document 6 stopping in a

designated position, drive of drive rollers 25, 26, 27 is stopped.

Then, reading operation of the back of document 6 is executed.

[0024] After reading the back of document 6, together with conveyance belt 16 again turning counter clockwise, drive rollers 25, 26, 27 and discharge roller pair 38 are driven, and secondary conveyance path 20 passes switch back conveyance path 21 and quaternary conveyance path 24 and again conveys document 6 reversed front side to contact glass 3. Then, at the point where document 6 passes quaternary conveyance path 24, together with changeover tab 35 moving to solid line position from dashed line position, conveyance belt 16 turns counter clockwise. Document 6 is conveyed inside switch back conveyance path 21 from contact glass 3 past secondary conveyance path 20. At this time, paper feed belt 7 again starts driving and the next paper feed operation of document 6 is started.

[0025] By sensor 36 detecting a rear edge of document 6 conveyed inside switch back conveyance path 21, together with changeover tab 34 moving from solid line position to dashed line position, counter clockwise turning drive rollers 26, 27 turn clockwise. By doing this, document 6 is switched back inside switch back conveyance path 21, and passing through tertiary conveyance path 22 is discharged to discharge stand 23 by discharge roller pair 38.

[0026] Below, document 6, by executing repeatedly the above explained operation on document 6 until document setting sensor 10

does not detect document 6, two-sided document processing of document 6 in document setting stand 5 is completed.

[0027] [Invention effects]

By this invention, because it is equipped with a switch back conveyance path and reverse conveyance path between a document setting stand and a document discharge stand, it is possible to provide an automatic document conveyance device aimed at small image reading devices, while also making it possible to execute reading from one page of a two-sided document.

[Simple Explanation of the Figures]

[Figure 1] A cross section figure showing an implementation example of an automatic document conveyance mechanism of this invention.

[Explanation of markings]

- 1 - Automatic document conveyance device
- 2 - Image forming device
- 3 - Slit glass
- 5 - Document setting stand
- 6 - Document
- 7 - Paper feed belt
- 9 - Press up plate
- 11 - Resistance roller
- 12 - Primary conveyance path
- 16 - Conveyance belt

/5

- 20 - Secondary conveyance path
- 21 - Switch back conveyance path
- 22 - Tertiary conveyance path
- 23 - Paper discharge stand
- 24 - Quaternary conveyance path
- 38 - Paper discharge roller pair

Figure 1

